EARLEX SPRAY STATION®



HV7000

OPERATING INSTRUCTIONS

Thank you for purchasing the Earlex SprayPort. This is a highly versatile spray kit and can be used on a variety of applications.

BEFORE USE - PLEASE READ THE SAFETY & OPERATING INSTRUCTIONS.

Please retain for future reference

SAFETY OPERATING INSTRUCTIONS

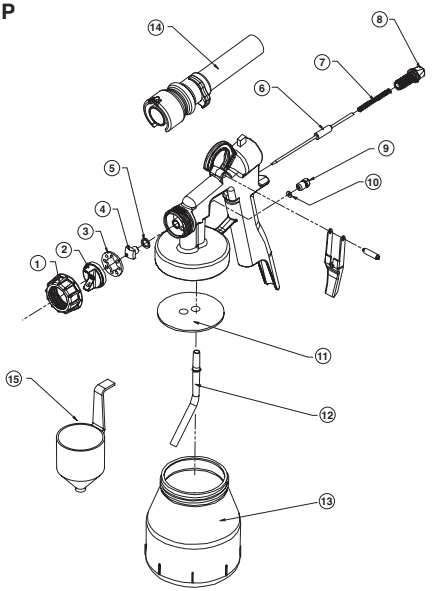


PLEASE READ BEFORE USE

- **CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK OR INJURY, DO NOT USE IN THE RAIN. STORE INDOORS**
- The substances used with this spray applicator (paint, thinners etc) may contain hazardous, harmful, explosive or corrosive materials.
 ALWAYS COMPLY WITH THE SAFETY INSTRUCTIONS ISSUED WITH THIS PRODUCT AND THE MATERIAL BEING USED.
- The spray applicator must only be used with paints and solvents that have a suitable flash point for spraying. If in doubt, consult the paint or solvent manufacturer's data
- Always ensure there is adequate ventilation when spraying.
- NEVER spray near an open flame, including an appliance pilot flame.
- NEVER smoke when spraying.
- Always disconnect the unit from the mains supply when re-filling the paint container.
- Always disconnect the unit from the mains supply when cleaning the spray applicator.
- Always ensure the spray area is safe and free from all debris that may present a fire or trip hazard.
- NEVER, under any circumstances, point the spray gun at another person or animal. In the event of injury occurring, seek expert medical advice immediately.
- NEVER allow children or unauthorised users to operate or play with the spray equipment. This equipment is for professional use only.
- Always read the paint manufacturer's thinning instructions before use.
- Always wear the correct protective face mask when spraying. We also recommend wearing gloves, goggles and overalls.
- After every use ensure that you clean the spray applicator thoroughly & grease the gland washer.
- Use only genuine manufacturer replacement parts.
- Only use the spray equipment as detailed in these instructions.
- Do not use the air hose or mains cable to pull the turbine unit.
- Check the hoses, hose connectors & mains cable daily. Any worn or damaged parts should be replaced immediately.
- We recommend the use of ear protectors.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

SPRAY APPLICATOR SPARE PARTS DRAWING

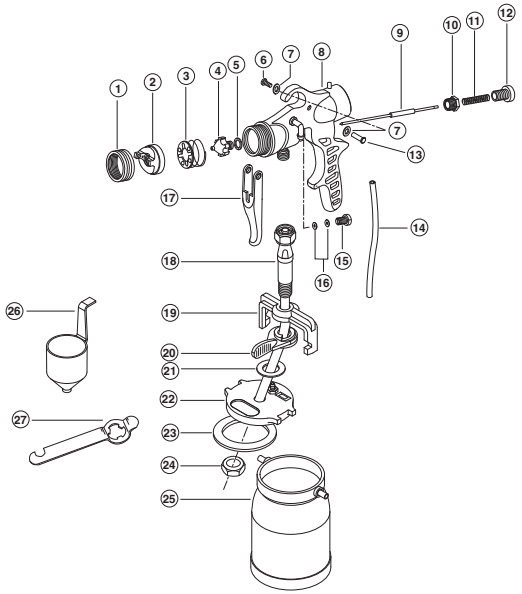
TYPE P



Key No.	Description	Part
01.	Air Cap Ring	L0215
02.	Air Cap	L0238
03.	Spray Direction Plate	L0206
04.	2.0mm Fluid Tip	L0237
05.	Fluid Tip Seal	L0211
06.	2.0mm Fluid Needle	L0236
07.	Spring	L0216
08.	Fluid Adjusting Screw	L0210
09.	Gland Nut	L0208
10.	Gland	L0272
11.	Paint Container Seal	L0335
12.	Paint Feed Tube	L0214
13.	Paint Container (Clear)	L0201
14.	Hose Assembly	N0182
15.	Viscosity Cup	SG243

Optional Extras: Nozzles & Fluid Tips of different sizes can be obtained as sets. Please call our helpline to order these on +44 (0) 1483 454666.

TYPE A

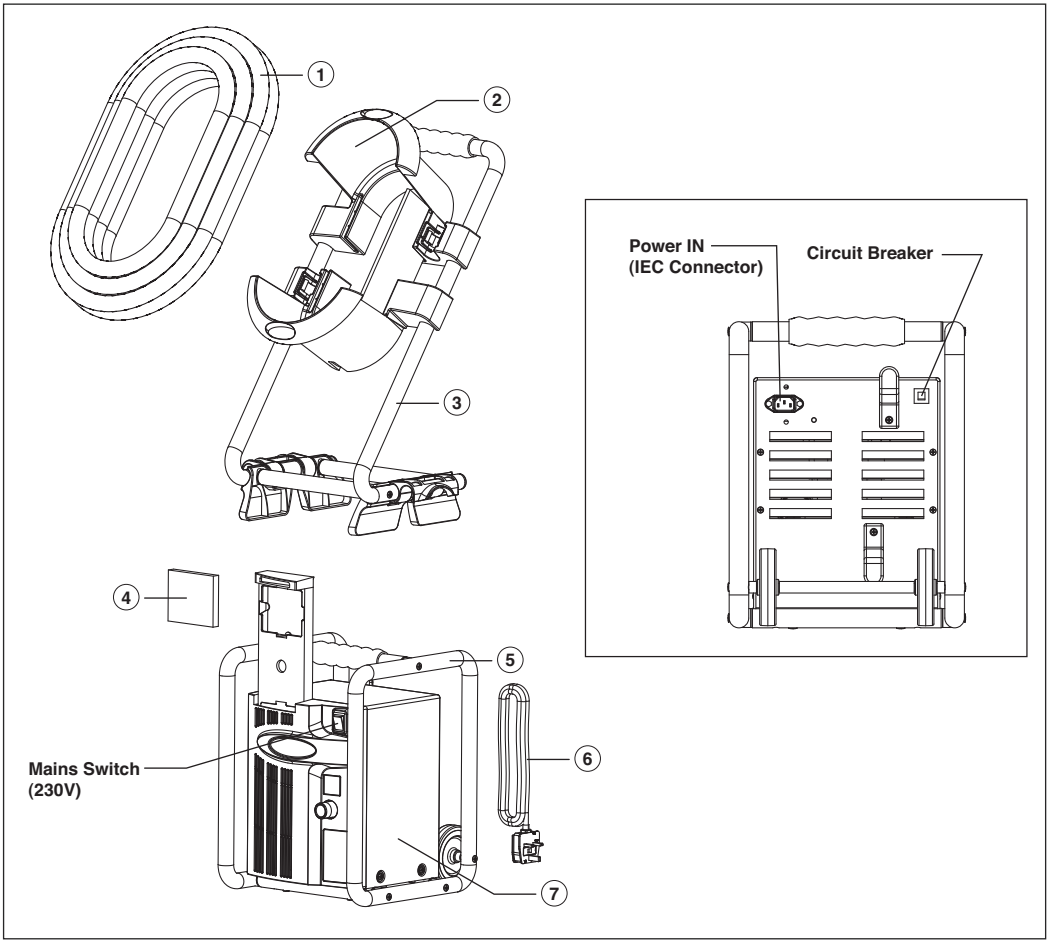


Key	Description	Part No.
1.	Air Cap Ring	L0151
2.	Air Cap	L0517
3.	Air Direction Plate Assy	L0162
4.	2.0mm Fluid Tip	L0157
5.	Fluid Tip Seal	L0159
6.	Pivot Screw	L0179
7.	Washer	L0195
8.	Main Body Assy	L0180
9.	2.0mm Fluid Needle	L0166
10.	Adaptor	L0174
11.	Spring	L0175
12.	Adjusting Screw	L0176
13.	Pivot	L0178
14.	Air Feed Tube	L0182
15.	Gland Nut	L0173
16.	Gland Washer (2 pcs)	L0168
17.	Operating Lever	L0177
18.	Centre Bolt & Pick Up Tube Assy	L0183
19.	Yoke	L0184
20.	Clamp Lever	L0185
21.	Shim	L0186
22.	Lid Assy	L0187
23.	Gasket	L0188
24.	Centre Bolt Nut	L0189
25.	Paint Container	L0190
26.	Viscosity Cup	SG243
27.	Spanner	L0191

Optional Extras: Nozzles & Fluid Tips of different sizes can be obtained as sets under the following accessory numbers. Please call our helpline to order these on +44 (0) 1483 454666.

1.0mm dia Fluid Tip, Needle & seal	HV5ACC10R
1.5mm dia Fluid Tip, Needle & seal	HV5ACC15R
2.0mm dia Fluid Tip, Needle & seal	HV5ACC20R
2.5mm dia Fluid Tip, Needle & seal	HV5ACC25R

TURBINE UNIT & CARRIER STAND PARTS DRAWINGS (230V Models)



PARTS LIST

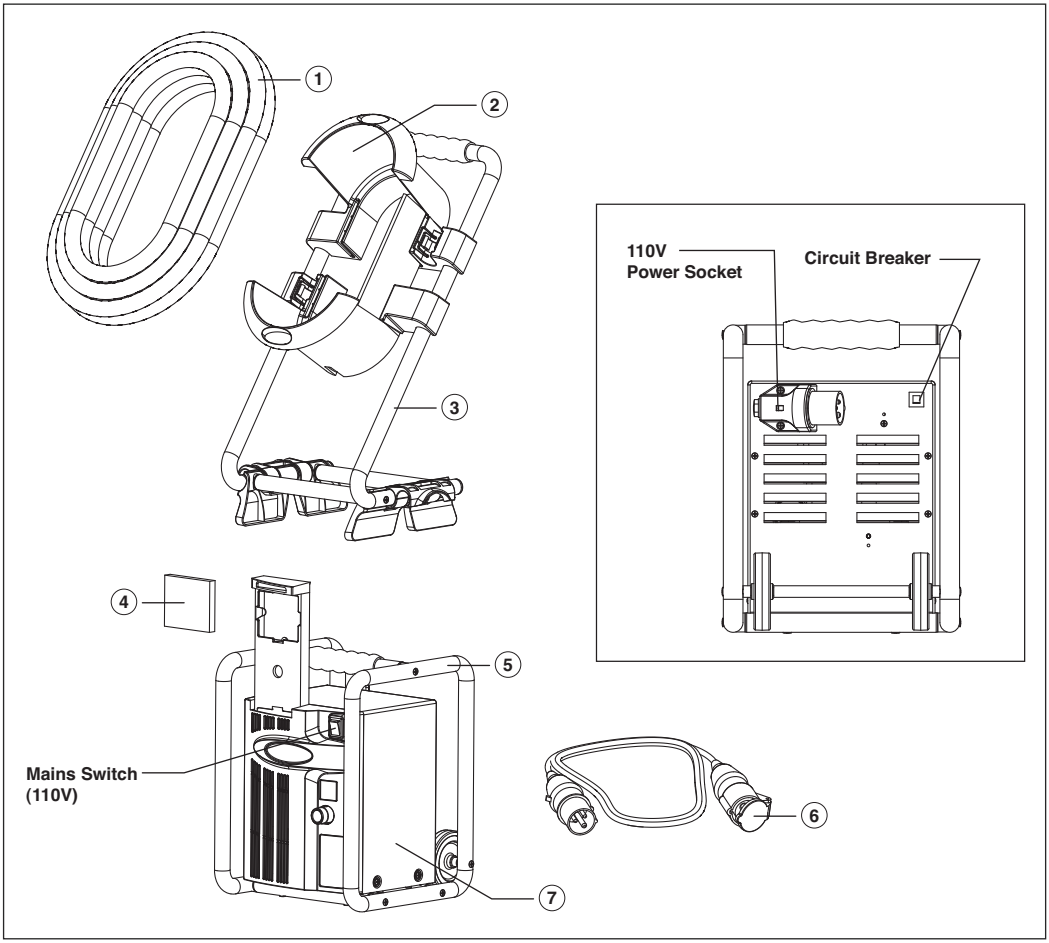
1. Hose Connector Assembly	N0182	5. Main Frame Assembly	N0161
2. Semi Hose Reel Moulding	N0116	6. Power Cord	C3P
3. Carrier Frame Assembly	N0162	7. Motor Unit Assembly	N0159
4. Filter Media x 2	N0087		

FOR INFORMATION ON ALL SPARE PARTS FOR THIS UNIT PLEASE CONTACT EARLEX LTD ON OUR HELPLINE NO: +44 (0) 1483 454666

TECHNICAL SPECIFICATION

Volts	230V	Length of hose	9.00m
Wattage	1100W	Container capacity	0.9l(P)/1.0l(A)
Turbine Stages	3	Sound Pressure Level	96db (A)
Length of mains cable	2.00m		

TURBINE UNIT & CARRIER STAND PARTS DRAWINGS (110V Models)



PARTS LIST

1. Hose Connector Assembly	N0182	5. Main Frame Assembly	N0161
2. Semi Hose Reel Moulding	N0116	6. Power Cord	N0098
3. Carrier Frame Assembly	N0162	7. Motor Unit Assembly	N0160
4. Filter Media x 2	N0087		

FOR INFORMATION ON ALL SPARE PARTS FOR THIS UNIT PLEASE CONTACT EARLEX LTD ON OUR HELPLINE NO: +44 (0) 1483 454666

TECHNICAL SPECIFICATION

Volts	110V	Length of hose	9.00m
Wattage	1100W	Container capacity	0.9l(P)/1.0l(A)
Turbine Stages	3	Sound Pressure Level	96db (A)
Length of mains cable	2.00m		

INTRODUCTION

The Earlex SprayPort is an industrially rated, portable, paint spraying system and is intended for use by professionals. HVLP stands for High Volume, Low Pressure. This is a type of spraying that allows you to spray extremely accurately but without all the overspray that occurs with high pressure tank equipment. In some parts of the world the high pressure systems are banned by law on environmental grounds and HVLP systems are the only alternative for professional spraying. This system is extremely easy to use, very safe and reduces the amount of paint used.

The Earlex SprayPort is a portable system that is made up as a trolley unit that can be broken down into two separate parts, the main Turbine Unit and the Carrier Stand. These two parts connect together via two quick release clips allowing the complete system to be wheeled from a vehicle to the workplace or around the workshop. They are easily separated so they can be stored in the back of a van or truck. Your Spray Port can be supplied with a plastic spray applicator Type P or, an aluminium spray applicator Type A.

PLEASE NOTE: We have done all we can to ensure that used correctly and according to these instructions, this spray applicator will give long and trouble free life. We accept no responsibility for damage caused by the use of incorrect or unsuitable substances, paints or fluids which have not been thinned correctly or are unsuitable for the surfaces to which they are applied, health hazards arising from lack of ventilation when working in confined spaces or failure of the equipment due to inadequate cleaning of the components after use. If in doubt, always test a small inconspicuous area first. Always read the paint manufacturer's instructions first. Neither our guarantee nor the above statement affects your statutory rights.

IMPORTANT: SELECTING PAINT

This is a highly versatile spray kit that can be used with several different spray mediums including varnishes, wood preservatives, enamels, oil and water based paints and cellulose. However some materials cannot be sprayed so please check the recommendation of the manufacturer before *buying the paint. If a material* refers to brush application only then it usually cannot be sprayed.

THIS UNIT SHOULD NOT BE USED FOR TEXTURED PAINTS. THESE MATERIALS CONTAIN PARTICLES OF GRIT THAT WILL CAUSE PREMATURE AND EXCESSIVE WEAR. USE OF SUCH MATERIALS WILL INVALIDATE THE GUARANTEE. TO OBTAIN THE BEST RESULTS FROM YOUR SPRAY KIT PLEASE READ THE INSTRUCTIONS CAREFULLY BEFORE USE.

PREPARATION

Preparation of the surface and thinning of the paint are the two most important areas to be concerned with to obtain the best results from your spray kit. Ensure all surfaces are free from dust, dirt, rust and grease. If necessary, smooth with sandpaper or similar. Masking off is important to ensure you do not spray those areas you wish to remain untouched.

THINNING

Your spray kit is supplied with a viscosity cup. Viscosity is a technical term used to indicate if a product is very thin or very thick. If thin, the viscosity is said to be low, while if very thick the viscosity is said to be high. Viscosity is measured in seconds. In order to spray some materials they need to be "thinned" (diluted). Thinning is very important when spraying. Most paints are supplied ready for brush application and *may need to be thinned (diluted)* for spraying purposes.
Follow the manufacturers guide for thinning in conjunction with a spray applicator. If in doubt please contact the manufacturers of the paint. The viscosity cup supplied will help you determine the correct thickness of the paint. Paint is "thinned" by adding the substance which the paint is based upon. If a water based paint then water is added, if oil based then white spirit, if automotive coating then an automotive coating thinner is added.
As some paints, wood preservatives and other sprayable materials contain particles that have differing qualities, please ensure that when filling the paint container of the spray applicator, that the paint is filtered through either a funnel with a filter on it or through nylon tights or stockings. This will ensure that no large particles enter the paint container, so preventing blockages and providing you with trouble free spraying. Ensure that a face mask, gloves and goggles are worn at all times when spraying.

IDEAL VISCOSITY

Water based paints and emulsions	25 - 75 seconds	**Varnishes**	Manufacturer's ratio
		Aluminium paints	Manufacturer's ratio
Oil based paints	45 - 50 seconds	**Wood stains**	Manufacturer's ratio
Wood preservatives	No dilution		
Primers	45 - 50 seconds		

This spray applicator can be used with products having a viscosity ranging from 25 to in excess of 75 seconds. Dip the viscosity cup into the material and fill up. Time how long it takes for the viscosity cup to empty (Fig.3).
Using the above chart (or manufacturer's instructions) as a guide determine if the material requires further thinning, if so then thin accordingly.
Some paints are outside the ranges above. Please contact our helpline for further information.


Fig.3

OPERATION

- Fill the paint container with the material to be sprayed. DO NOT OVERFILL above MAX level indicator. Push the Feed Tube firmly into the base of the spray applicator body (gun 'P' only) and re-fit the paint container into the spray applicator body. (See exploded view on page 3 to show the fitting detail for the different spray applicator types.)
- Unwind the hose from the Carrier Stand & screw the motor end of the hose to the outlet port at the front of the turbine unit. Connect the spray applicator end of the hose to the spray applicator using the quick release connector. Uncoil the power cord and plug it in to a suitable power outlet.

ALWAYS KEEP THE MOTOR UNIT AS FAR AWAY FROM THE SPRAYING AREA AS POSSIBLE TO PREVENT PAINT CONTAMINATING THE MOTOR.

MASK OFF ANY AREA YOU DO NOT WISH TO SPRAY.

Once you have set up ready to spray, switch on the unit. No paint will be sprayed until the trigger on the spray applicator is gently pulled. Before starting any work on spraying actual objects we suggest you spend some time practising on cardboard or newspaper until you have got used to how the spray applicator works.

SETTING UP YOUR SPRAY APPLICATOR

- Choose the best Needle & Fluid Tip for your application.

Your SprayPort is supplied to you with a 2.0mm diameter Needle & Fluid Tip. This is a good size for most applications. However, there are other sets available to cater for a wider range of materials that you may want to spray. In general, the larger the diameter of the Needle & Fluid Tip, the more suitable it is for higher viscosity materials. The larger diameters also allow a greater volume of material to be applied. The smaller diameters are more suitable for low viscosity materials & lighter application. For the SprayPort type "P", Needle & Fluid Tip sets are available at 1.0mm and 1.5mm diameter. For the Spray Port type "A", Needle & Fluid Tip sets are available at 1.0mm, 1.5mm and 2.5mm diameter. See page 8 for details.

NEEDLE SELECTION GUIDELINES	
Needle/Fluid Tip Size	**Material**
1.0mm/1.5mm	Acrylics, Synthetics, Polyurethane, Lacquers, Fluorescents, Wood Stains
1.5mm/2.0mm	Oil base, Hammers, Oxides, Primers, Air Drying, Enamels, Varnish, Marine Paint, Multi-Colour, Industrial Synthetics, Latex Oils, Polyurethane, Aluminium
2.0mm/2.5mm	Emulsions, Chlorinated rubber, Oxides, Zinc Rich Primers, Epoxy Plastic Adhesives, Polyurethane, Floor Paving Paints

SPRAY PATTERN

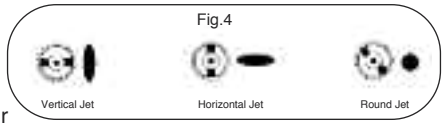


Fig.4

The spray applicator has 3 different spray patterns – Horizontal, Vertical and Round (Fig.4) The horizontal and vertical are recommended for large surfaces. The round spray is used for small objects or for areas - such as corners – that are difficult to reach. To adjust the spray pattern, loosen the Air Cap Ring (1), adjust the position of the Air Cap (2) to obtain either a vertical, horizontal or round pattern then re-tighten the aircap ring.
*Gun 'A' does not need aircap ring released to turn cap.

PAINT VOLUME

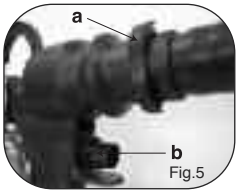
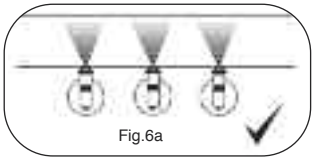


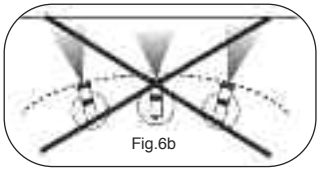
Fig.5

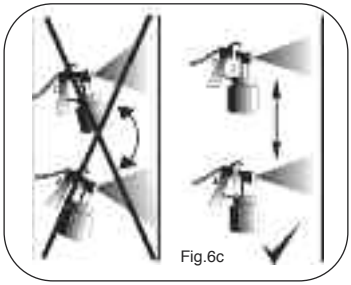
Fig.5(a) shows the Air Volume Control Valve which regulates the flow of air to the gun. When the Valve is fully open you will achieve maximum coverage. To achieve this rotate 'fully' anti-clockwise. This is to be used in conjunction with the Fluid Adjusting Screw for best results.
The volume of paint sprayed is easily adjustable (Fig.5b). Completely close Fluid Adjusting Screw (B) by turning this clockwise as far as it will go. Whilst pulling the trigger, begin turning the adjustment screw counter-clockwise until the volume of paint you require is obtained. If the paint spray is too wide or contains too much paint turn the Fluid Adjusting Screw clockwise again. Once the correct spray pattern & paint volume is obtained, you are ready to begin spraying.

SPRAYING

1. To obtain the best results always keep your spray applicator level and spray equally from side to side or up or down 25-30cm from the surface. Avoid spraying at an angle as this will lead to runs on the surface (Fig.6a).
2. Let your arm control the left to right movement rather than your wrist as this will aid even paint distribution over the whole area (Fig.6b).
3. Do not tip the sprayer to more than 45° angle when the motor is switched OFF. You can tip the spray gun at more of an angle when spraying celings and decking etc, providing that the motor is switched ON.

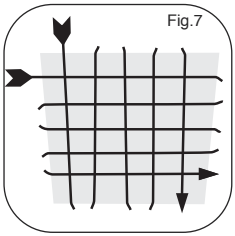

Fig.6a


Fig.6b


Fig.6c

HELPFUL HINTS

1. Evenly control the speed of movement of the spray applicator. A fast speed will give a thin coat and a slow speed will give a thick coat.
2. Only apply one coat at a time. If a further coat is required follow the paint manufacturer's instructions for drying times.
3. If spraying small areas or objects keep the output setting low as this will avoid excessive use of paints and will minimise overspray.
4. When spraying large areas or objects, it is best to use a criss-cross pattern, either from left to right then up or down or vice-versa. This will ensure maximum coverage (Fig.7).
5. Avoid stopping and starting when spraying as this can lead to too much or not enough material on a surface.
6. To ensure edges are covered, commence spraying just to the side of area being sprayed.
7. CLEAN SPRAYER AFTER EVERY USE (SEE CLEANING INSTRUCTIONS)


Fig.7

CLEANING INSTRUCTIONS

Remember to disconnect the unit from the mains power when undertaking any cleaning of the SprayPort.
THE SPRAY APPLICATOR MUST BE THOROUGHLY CLEANED IMMEDIATELY AFTER USE. IF THE PAINT DRIES INSIDE THE GUN, CLEANING WILL BECOME MUCH MORE DIFFICULT AND MAY RENDER THE APPLICATOR INOPERABLE. THIS IS NOT COVERED BY WARRANTY.
The spray applicator is the same as a paintbrush, if it is not cleaned it will go hard and can become useless. You must therefore clean this out after use.

SPRAY GUN

1. Remove the applicator container.
2. Pour any leftover paint into its container so that it can be used for future projects.
3. Pour a quantity of the respective thinner into container, shake the spray applicator lightly, reassemble the applicator, then spray this liquid through the applicator. Repeat this until the thinner being sprayed is coming through with no traces of paint.
4. Clean any traces of paint off the outside of the spray applicator.
5. Clean the container Seal inside the spray applicator body.

FLUID TIP & NEEDLE (Type P)

1. Unscrew Air Cap Ring (1)
2. Remove the Air Cap (2)
3. Completely remove Fluid Adjusting Screw (8)
4. Remove the Spring (7)
5. Remove the Fluid Tip Needle (6) by gently pulling the trigger
6. Remove Direction Plate noting the position of notches (3)
7. Remove the Fluid Tip (4)

7a. Remove Paint Feed Tube (12)
8. Remove Paint Container Seal (11)
9. Place all of these items into a container and clean them using a brush and clean thinners
10. Clean the inside of the body of the gun
11. Thoroughly dry these parts before reassembling
12. Before refitting the Needle, dip its end into some petroleum jelly. This will automatically lubricate the gland washer as it is inserted (10)
13. Reassemble parts in reverse order

It is recommended to fit the Fluid Tip (4) prior to the needle to reduce the risk of damaging the needle tip.

FLUID TIP & NEEDLE (Type A)

1. Remove the Air Cap Ring (1)
2. Remove the Air Cap (2)
3. Remove Direction Plate & Spring Assembly (3)
4. Unscrew Adjusting Screw (12) & pull out the Needle (9) & Needle Spring (11).
5. Use the spanner supplied to remove the Fluid Tip (4) & Fluid Tip Seal (5)
6. Immerse all of the parts above in thinners & clean them thoroughly using the cleaning kit supplied with the gun.
7. Before refitting the Needle, dip its end into some petroleum jelly . This will automatically lubricate the gland washer as it is inserted (16).
8. The external surfaces of the spray applicator can be wiped clean with a cloth soaked in thinners.

NEVER DISPOSE OF PAINTS OR SOLVENTS INTO DRAINS. CONTACT YOUR LOCAL COUNCIL TO ARRANGE COLLECTION OR FOR DETAILS OF NEAREST REGISTERED DISPOSAL SITE.

TURBINE UNIT AND CARRIER STAND

- The Turbine unit and the Carrier and Stand can be cleaned using a damp cloth and a little thinners to remove paint stains.

MAINTENANCE

SPRAY APPLICATOR

- Keep the internal workings of the spray applicator clean. The spray applicator should be thoroughly cleaned after each use. Follow the cleaning instructions on page 9 with reference to the drawings on page 3
- Check the needle and fluid tip on a regular basis for excessive wear, and replace as necessary. See the cleaning instructions for the correct procedure for removing these parts. Replacement needle sets are available from Earlex Ltd.
- Keep all moving parts lubricated with a light smear of petroleum jelly.
- Lubricate the gland washer, after each time you clean it, with a light smear of petroleum jelly.
- Check there is no leakage from the gland washer. If there is, tighten the gland nut a little to ensure a seal with the needle. Do not over-tighten this nut, also ensure the gland washer has not dried out. If it has, lubricate it as above.

TURBINE UNIT

- Check the condition of the filters that are housed in the front cover. This is easily removed by sliding it upwards. If clogged, remove and blow out using an airline, or wash out using a mild detergent if necessary.
- Keep the outer surface of the air hose free from harmful substances such as petrol, automotive coating thinners, paint strippers & oil. Prolonged exposure to such substances may cause irreparable damage. Always check and clean off any excess immediately.
- Check the condition of the power cord regularly. If there are any cuts or serious abrasions to the outer sheath, replace it immediately. When the unit is not in use, keep the power cord coiled around the brackets at the back of the turbine case. When the unit is being used, protect the power cord and any extension cord from damage that could be caused, for example, by traffic or hazardous substances.

The turbine unit can only be fully serviced by authorised service agents.

TROUBLESHOOTING

PROBLEM	CAUSE	ACTION REQUIRED
The paint runs or sags?	Paint too diluted	Add undiluted material
	Paint volume too high	Reduce the paint flow by turning Fluid Adjusting Screw
	Moving too slowly	Increase speed of application
	Spray gun trigger being held for too long	Release trigger earlier
	Spray gun too close	Increase the distance between gun and workpiece
Paint is thin or irregular	Paint too thick	Add thinner
	Paint volume too low	Increase the paint flow by turning Fluid Adjusting Screw
	Moving too fast	Reduce speed of application
	Spray gun clogged	Clean the gun
	Spray gun too far away	Reduce the distance between gun and work piece
No spray pattern being produced	Air Volume too low	Set air volume control valve to max by turning anti-clockwise
	Paint too thick	Add thinner
	Gun clogged	Clean the spray gun
	Pick up pipe clogged	Clean Paint Feed Tube
	Air hose split	Replace air hose
	Gritty paint	Filter the paint
	Container almost empty	Refill container
	Spray gun at an angle	Ensure Paint Feed Tube is angled towards paint
	Air intake blocked	Check the condition of the Filter and clean as neccessary
Unit will not start	Circuit breaker tripped (HV7000 unit)	Check the back of the unit. If the circuit breaker has tripped, a white push button indicator will appear. Push in to reset. If this does not cure the problem, please refer to your nearest service agent.
	House circuit breaker	Check and reset if required.

MAINS CONNECTION 230V UK ONLY

The Spray Port is supplied fitted with a 13 amp plug and fuse. If a replacement fuse is required this must be rated at 13 amps. If in doubt consult an electrician.

WARNING - THIS APPLIANCE MUST BE EARTHED.

If any eletrical component is damaged or faulty, it must be replaced by the manufacturer or its appointed service agent or a similarly qualified person in order to avoid a hazard.
As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- The wire which is coloured green and yellow must be connected to the terminal in the plug which is marked with the letter **E** or by the earth symbol, or coloured green or green and yellow.
- The wire which is coloured blue must be connected to the terminal which is marked with the letter **N** or coloured black.
- The wire which is coloured brown must be connected to the terminal which is marked with the letter **L** or coloured red.

MAINS CONNECTION 110V UK ONLY

The unit is fitted with a 16 amp industrial plug for insertion into a suitable transformer or generator supplying 110V a.c. outlet. If this mains cable becomes damaged it must be replaced by the manufacturer or its appointed service agent or a similarly qualified person in order to avoid a hazard.

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HV7000 Patent - GB 2429179
Gun (Type A) Design Registration - GB 3006933

EC Declaration of Conformity
We declare that the unit: HV7000 Conforms to LVD 2006/95/EC, EN60335-1, EMC 2004/108/EC, EN55014-1, EN61000-3-2, EN61000-3-3.



Tim Hopper Technical Director

GUARANTEE

This product is guaranteed for a period of 12 months for ordinary use and 6 months for hire purposes or where the unit is lent to other users.The guarantee is against faulty manufacture and materials. Whilst every possible care is taken by Earlex to ensure that our products leave the factory in good working order, Earlex cannot under any circumstances accept liability for problems or damage caused by their subsequent use. It is the responsibility of the user to ensure that surfaces to be treated or cleaned are suitable for spraying. The guarantee does not affect your statutory rights.

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